

**Notice of Allowability**

Application No.

✓  
10/671,806

Applicant(s)

DOI ET AL.

Examiner

Natalia Figueroa

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE (28 September 2005).
2. ☒ The allowed claim(s) is/are 1,2,4-7,11,12 and 14-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### REASONS FOR ALLOWANCE

1. Applicant's submission filed on 28 September 2005 has been entered.

#### *Allowable Subject Matter*

2. Claims 1-2, 4-7, 11-12 and 14-17 are allowed.
3. The following is an examiner's statement of reasons for allowance:

RE claim 1, the prior art of record, and in particular Suzuki et al (USPN 6,798,598) fails to teach or suggest a method comprising decreasing the write current during the present write operation in multiple steps the number of which depends on the number of recording operation interruptions, wherein the write current is less than the given write current at the end of the write operation; or if said predetermined period of time has not elapsed since the most recent write operation terminated, applying a write current less than the given write current at the beginning of the present write operation.

RE claim 2, the prior art of record, and in particular Suzuki et al (USPN 6,798,598) fails to teach or suggest a method comprising applying a second write current during a second later portion of the present write operation, wherein the first write current is higher than the second write current, the write current being decreased from the first write current to the second write current in multiple steps the number of which depends on the number of recording operation interruptions; or if said predetermined period of time has not elapsed since a most recent write operation terminated, applying the second write current during the first and second portions of the present write operation.

RE claim 11, the prior art of record, and in particular Suzuki et al (USPN 6,798,598) fails to teach or suggest a device comprising a write current control circuit that causes said write

current to decrease in multiple steps, the number of which depends on the number of recording operation interruptions, during a write operation so that for an initial portion of the write operation, the write current being higher than the write current for an ending portion of the write operation.

RE claim 15, the prior art of record, and in particular Suzuki et al (USPN 6,798,598) fails to teach or suggest an apparatus comprising wherein said magnetic disk drive has means for setting the value of write current to be supplied to the coil for each of said specified segments and recording information while varying the write current in multiple steps, the number of which depends on the number of recording operation interruptions, during a writing sequence.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### *Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents are cited to further show the state of the art with respect to current control in disk drives.

a) Ishii (JP Pub. 2000-048312): Discloses a current controlling means for a magnetic disk device.

b) Lee (USPN 6,118,614): Discloses optimizing the write current in a magnetic disk recording device.

c) Christensen et al (JP Pub. 08-096309): Discloses a write current selecting means for a data storage device.

d) Yun (USPN 6,175,456): Discloses controlling the write current of a magnetic disk.

e) Gaertner et al (USPN 6,445,531: Discloses controlling the actuator of a disk drive.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Figueroa whose telephone number is (571) 272-7554. The examiner can normally be reached on Monday - Thursday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NFM

DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600